

The Eight Pillars of the Nuclear Non-proliferation Regime and the Search for Global Security

Joseph M. Siracusa,
Royal Melbourne Institute of Technology,
University of Melbourne.

Abstract

How does a nation—or a community of nations—seeking to enhance their security, prevent the spread of nuclear weapons? Two approaches that have been contemplated and tried immediately come to mind—political (or diplomatic) or punitive actions. The political approach led, gradually, to building the pillars supporting the nuclear nonproliferation regime. Since the idea of a formal, structured international community has not overcome most peoples' powerfully-held allegiance to their own nation's sovereignty, the construction of the regime to halt or at least slow the spread of nuclear weapons drew heavily on diplomacy. The various pillars of the regime, therefore, were built over the years by separate political agreements, conventions and treaties—some multilateral, others bilateral—each dealing with specific issues related to nuclear proliferation. Separately, these mostly Cold War pacts may appear to have contributed little to rein in this awesome problem, but viewed together they may be seen as realistic pillars, when fully implemented, in the architecture of today's nonproliferation regime. Not yet fully appreciated, the Soviet-American nuclear rivalry that dominated the first half of the twentieth century produced a convergence of common strategies designed not only to slow the spread of nuclear weapons, in general, but also to encourage non-nuclear states to forgo them altogether. Ironically, and ever so gradually, Washington and Moscow prepared the foundation of a future, global nuclear regime, albeit in piecemeal fashion, without actually solving or taming their own rivalry. It is in this sense, then, that the evolution of the various components of the Cold War nonproliferation regime has well expanded its reach.

Policy Implications

- Reviews why some nations in the “first Nuclear Age” or the Cold War undertook nuclear weapons programs and why other nations, some of whom started such programs, did not continue with them.
- Raises the question on whether the NPT regime is capable of dealing with current dangers or whether other sanctions, economic and military, must be developed and applied to prevent nuclear proliferation.

How does a nation—or a community of nations—seeking to enhance their security, prevent the spread of nuclear weapons? Two approaches that have been contemplated and tried immediately come to mind— political (or diplomatic) or punitive actions. The political approach led, gradually, to building the pillars supporting the nuclear nonproliferation regime. Since the idea of a formal, structured international community has not overcome most peoples' powerfully-held allegiance to their own nation's sovereignty, the construction of the regime to halt or at least slow the spread of nuclear weapons drew heavily on diplomacy. The various pillars of the regime, therefore, were built over the years by separate political agreements, conventions and treaties—some multilateral, others bilateral—each dealing with specific issues related to nuclear proliferation. Separately, these mostly Cold War pacts may appear to have contributed little to rein in this awesome problem, but viewed together they may be seen as realistic pillars, when fully implemented, in the architecture of today's nonproliferation regime. Not yet fully appreciated, the Soviet-American nuclear rivalry that dominated the first half of the twentieth century produced a convergence of common strategies designed not only to slow the spread of nuclear weapons, in general, but also to encourage non-nuclear states to forgo them altogether. Ironically, and ever so gradually, Washington and Moscow prepared the foundation of a future, global nuclear regime, albeit in piecemeal fashion, without actually solving or taming their own rivalry.

The 1967 Treaty on the Non-Proliferation of Nuclear Weapons (NPT), sponsored by the UN, has emerged as the center pillar of this informal regime, even though preceded chronologically by other significant pillars. Supporting the NPT are six significant other pillars. In the 1950s, the (1) Atoms for Peace program, designed to share technology to non-nuclear states for peaceful uses, and (2) the International Atomic Energy Agency (IAEA), initially needed to monitor Atoms for Peace activities, soon found a vital supporting role in the NPT and other activities. Meanwhile, in 1959, the initial (3) nuclear-weapons-free zone (NWFZ), designed to control, monitor or prohibit nuclear weaponry in a specific geographical area, came into existence. Diplomatic efforts, beginning in the late 1950s, aimed at (4) to ban nuclear testing, since it was considered a vital pillar of nonproliferation, resulted in the Limited Test Ban Treaty of 1963; unfortunately, a comprehensive nuclear test ban (CTB) was still missing early in the twenty-first century. Restraints on transferring materials necessary for the development of nuclear

weaponry were established, in 1974, by the informal (5) London Nuclear Suppliers Group. With the collapse of the Soviet Union at the end of the Cold War, the U.S.-sponsored (6) Cooperative Nuclear Threat Reduction program (1992) has sought to prevent Russian and other states' nuclear materials and weapons from falling into the hands of rogue nations or terrorists. Additional measures have been subsequently added to strengthen IAEA safeguards, to provide security for nuclear materials in transit and prevent a black market in weapons technology. The latter was highlighted by the activities of Pakistani scientist Abdul Qadeer Khan's network. Other measures, such as the Missile Technology Control Regime (1987) seeking to restrict the traffic in missiles and missile technology—the nuclear weapons delivery systems—complemented the array of nuclear non-proliferation activities (Burns, 2009, pp. 82, 94-95).

Has global proliferation of nuclear weaponry been slowed? 'I am haunted,' President John F. Kennedy worried in 1963, 'by the feeling that by 1970, unless we are successful, there may be 10 nuclear powers instead of four, and by 1975, 15 or 20.' That did not occur. In addition to the original five nuclear weapons states—U.S., Britain, Russia, France, and China—five other states have developed nuclear weapons: Israel, India, Pakistan, North Korea and South Africa, with Iran suspected of preparing to go nuclear in the near future.

On the other side of the ledger, Canada became the first country to decide against joining the nuclear weapons club. Even though in 1945 the Canadians had all the materials and technology at hand—the uranium, the science, and the technical head start—they decided it was not needed. Sweden, considered a top prospect in the 1950s, chose not to pursue nuclear weapons. Indonesia was suspected of pursuing a nuclear weapons program in the 1960s, but it did not mature. Egypt apparently began a nuclear weapons program in the 1960s, but gave it up in the 1970s and instead planned to seek a nuclear power program. Taiwan, which started a plutonium-based nuclear weapons program in the 1960s, also opted out of the nuclear weapons hunt in the 1970s under strong U.S. pressure. South Africa had a fully developed nuclear weapons program—possessing six weapons—before dismantling its facilities in 1990. Brazil and Argentina in 1991 joined in renouncing any designs on nuclear weaponry. Libya abandoned its hopes of a nuclear

weapons program under British and American pressure in 2003. Belarus, Ukraine and Kazakhstan returned nuclear weapons inherited at the end of the Cold War to Russia in the late 1990s. And the United Nations Special Commission (UNSCOM) dismantled Iraq's nuclear weapons program after the 1991 Gulf War. While the nonproliferation regime has not halted the diffusion of nuclear weapons technologies, it has clearly assisted in slowing it down. Less aggressive measures have also had a mixed record of success (Gowing, 1974, pp. 92-123; Trachtenberg, 1999).

Preventive Military Actions

Several policymakers have justified consideration of taking preventive military action against an adversary's nuclear facilities because they doubted the effectiveness of political nonproliferation measures. American officials engaged in serious discussions about launching preventive military assaults against both the Soviet and Chinese nuclear programs—before each successfully exploded its first atomic device, in 1949 and 1964, respectively. Secretary of State Dean Rusk allegedly discussed the prospect of joint measures with the Soviets to 'neutralize' the potential Chinese nuclear threat, but nothing came of it. The Indian government of Prime Minister Indira Gandhi seriously considered, but ultimately rejected, plans for preventive military attacks on Pakistan's nuclear facilities in the early 1980s (Newhouse, 1989, p. 197; Sagan and Waltz, 1995, p. 93).

Israel actually carried out a military strike against the Iraqi nuclear power facility at Osirak on 7 June 1981, an attack that was officially condemned by the Reagan administration. Commenting on how to deal with Iran's developing nuclear program, Bennett Rambert in 2006 reminded the *Bulletin of the Atomic Scientists* readers of the applicability of the Osirak raid: 'A dramatic military action to prevent nuclear weapons proliferation, the June 7, 1981 strike left a legacy that echoes today in the "all options are on the table" drumbeat emanating from Washington and Jerusalem'. The seemingly straightforward message to Iran and other would-be proliferators: Abrogate nonproliferation pledges in this post-9/11 era and risk being 'Osiraked'." Doubts over the effectiveness of such action (and the possible

consequences) dampened the enthusiasm, at least initially, for such action.

Nevertheless, Israel struck again on 6 September 2007, this time at a suspected nuclear facility in northern Syria. Israeli and American intelligence officers had decided that the site contained, the *New York Times* reported on 13 October, a partly constructed nuclear reactor, apparently modeled on one North Korea has used to create its stockpile of nuclear weapons fuel. Yet, the Syrian facility was years from being able to produce the spent nuclear fuel that could, through series of additional steps, be reprocessed into bomb-grade plutonium.

Nuclear Proliferation: Good or Bad?

Despite some seven decades of living with the bomb and constructing an international nonproliferation regime, the basic question still remains: Does the spread of nuclear weapons make the world safer or more dangerous? Many people usually have a quick response to this question: Of course, it makes things more dangerous. It might seem surprising, therefore, that not all nuclear experts agree, and the debate remains unresolved. Like so many of the issues relating to nuclear weapons, the debate is built largely on speculation and ambiguous historical experience. Nuclear proliferation remains urgent not just because of the risk of a terrorist organization getting its hands on nuclear weapons, but because the proliferation of weapons may also mean a proliferation of nuclear deterrents. Nuclear weapons have long been a force multiplier, able to make up for imbalances in conventional military power. Paradoxically, then, the unassailable lead of the United States in military power and technology, thanks largely to the so-called revolution in military affairs of precision-guided conventional munitions and advanced battlefield and strategic intelligence, might perforce invite other nations to acquire nuclear weapons as a way to influence or even deter American foreign policy. The lesson of the First Gulf War, one Indian general is reported as saying, is that you don't go to war with the United States without the bomb. President Bill Clinton's secretary of defense, Les Aspin, outlined the problem in December 1993:

“During the Cold War, our principal adversary had conventional forces in Europe that were numerically superior. For us, nuclear weapons were the equalizer. The threat to use them was present and was used to compensate for our smaller numbers of conventional forces. Today, nuclear weapons can still be the equalizer against superior conventional forces. But today it is the United States that has unmatched conventional military power, and it is our potential adversaries who may attain nuclear weapons.”

Chillingly, Aspin concluded, ‘We’re the ones who could wind up being the equilibree’ (Siracusa, 2008, p. 109).

A central element of the proliferation debate revolves around the perceived effectiveness of nuclear deterrence. As John F. Kennedy acknowledged in the wake of the Cuban missile crisis, even a small number of nuclear weapons can deter the most powerful states. If deterrence works reliably, as deterrence optimists argue, then there is presumably less to be feared in the spread of nuclear weapons. But if nuclear deterrence does not work reliably, deterrence pessimists maintain, more nuclear weapons states will presumably lead not just to a more complicated international arena but a far more dangerous one. Some commentators have made rational, well-argued cases that fears of nuclear proliferation—or the spread of nuclear weapons—are at the least exaggerated. Some go even further and argue that proliferation may actually increase global stability. It is an argument peculiar to nuclear weapons, as it does not apply and is not made with regard to other so-called weapons of mass destruction such as chemical and biological weapons. Nuclear weapons are simply so destructive, the argument goes, that using them is such a high bar that it would make for an irrational decision against a nuclear-armed foe (Waltz, 2012, pp. 2-5).

This was an idea frequently debated during the Cold War. French military strategist General Pierre Gallois observed in 1960 that the path to greater stability lay in the increased proliferation. ‘Few people are able to grasp that precisely because the new weapons have a destructive power out of all proportion to even the highest stakes, they impose a far more stable balance than the world has

known in the past,’ he said. ‘Nor is it any easier to make people realize that the more numerous and terrible the retaliatory weapons possessed by both sides, the surer the peace . . . and that it is actually more dangerous to limit nuclear weapons than to let them proliferate.’ Gallois made this argument in the context of justifying the French bomb and increasing NATO nuclear capabilities. ‘These,’ Gallois said, ‘are the realities of our time, but no one is willing to accept them at first blush’ (Coleman and Siracusa, 2006, p. 109).

As it turns out, not at second blush either. Notwithstanding a few notable proponents of the “proliferation equals more security” argument, the weight of opinion is mainly in the other direction. It has become an accepted norm—heightened especially since 9/11—that the spread of nuclear weapons is a bad thing: the greater the number of nuclear weapons in the world and the greater the number of nuclear powers, the more opportunities for disaster. Scott Sagan has highlighted the ways in which organizations and communications can fail; rather than being anomalies, accidents are an inherent part of organizations. When nuclear weapons are thrown into the mix, the risks of catastrophic accidents or miscalculations are sobering. Sagan argues that a fundamental level of risk is inherent in all nuclear weapons organizations regardless of nationality or region. It is an element that further compounds the problem of nuclear weapons in regions still embroiled by centuries old religious, cultural, and ethnic tensions. All of these elements combine in a barely controllable milieu of states’ nuclear weapons policy. Thus, the proliferation of nuclear weapons has posed and continues to pose multiple threats to major nuclear weapons powers (Sagan, 1993).

Seeking a Comprehensive Test Ban

The search for the means to halt nuclear testing began early and was closely linked to the desire to restrict the spread of nuclear weapons. Indeed, most analysts have viewed the cessation of nuclear testing as a litmus test for achieving that goal. President John F. Kennedy and Soviet Secretary General Nikita Khrushchev agreed to a partial or Limited Nuclear Test Ban in 1963 that most nations adopted. This treaty, while useful in reducing radioactivity in the atmosphere, did not halt the spread of nuclear weapons.

While the United States and Soviet Union sought to shelve the comprehensive test ban, other nations took the issue to the Eighteen-Nation Disarmament Conference (1962-1968) at Geneva. It was evident that the non-nuclear states considered the CTB as essential to halting proliferation. During the early years of Richard Nixon's presidency the CTB was generally avoided in superpower discussions so as not to interfere with U.S.-Soviet negotiations on strategic arms limitations. At a Moscow summit meeting with Premier Leonid Brezhnev, in July 1974, Nixon dismissed his host's proposal for a multilateral CTB on the grounds the U.S. Senate would not accept it. The two leaders, however, did agree on a bilateral Threshold Test Ban Treaty (TTBT) designed to limit underground tests to less than 150 kilotons, hold the number of tests to a minimum, not interfere with the other's efforts at verification, and exchange detailed data on all tests and test sites. The effective date of the pact was set at 31 March 1976, because the military chiefs on both sides wanted to complete some high-yield tests. Brezhnev and President Gerald Ford signed a follow-up Peaceful Nuclear Explosions Treaty (PNET) in May 1976 that would allow nuclear explosives of less than 150 kilotons to be used for non-military projects. For the first time, the PNET provided for on-site inspections under certain circumstances. Both nations agreed to honor the two agreements, even though ratification of both the TTBT and PNET continued to be delayed (Garthoff, 1994).

When President Jimmy Carter shifted the focus from the TTNT back to a comprehensive test ban the prospects for success appeared good. In November 1977, the Soviet Union indicated that it was willing to accept a verification system based on national technical means (each nation's individual intelligence-gathering system), supplemented by voluntary challenge inspections and automatic, tamper-proof seismic monitoring stations known as 'black boxes'. Yet, in Washington, opponents fearful of Soviet motives defeated the administration efforts. The weapons laboratories, the Joint Chiefs of Staff, Secretary of Energy James Schlesinger, National Security Adviser Zbigniew Brzezinski, and other administration officials killed the initiative by emphasizing the old 'safeguard' arguments that called for periodic tests to assure the reliability of the nuclear weapons stockpile. Brzezinski disclosed in his memoirs that he 'was not very interested' in the CTB negotiations and that he

'saw CTB as a likely embarrassment' to the administration's efforts to gain ratification of SALT II (Brzezinski, 1983, p. 172).

The election of Ronald Reagan put a temporary end to American participation in discussions regarding the CTB and, indeed, arms control, generally. In July 1982, Reagan formally withdrew U.S. participants in the CTB talks. Arguing that the Soviet Union might be testing over the TTNT's 150-kiloton threshold, he insisted that verification issues of both the TTNT and PNET must be renegotiated before discussions of a CTB could be considered. Critics noted that verifying that a test had taken place was much easier than determining its specific magnitude; therefore, the Reagan administration had things backwards. Pressure generated by the nuclear freeze movement and congressional resolutions failed to revive the stalled CTB negotiations. In 1984, Konstantin Chernenko who had just succeeded Yuri Andropov as general secretary of the Communist Party of the Soviet Union urged that the United States ratify the TTNT and PNET, as well as resume discussions on a comprehensive test ban. When Premier Mikhail Gorbachev wrote Reagan in December the next year that the Soviet Union would accept on-site inspections as part of a CTB agreement that, too, was rejected. Next, the Soviet leader unilaterally established a moratorium on nuclear testing in July 1985 and also urged Reagan to stop testing. Without a positive answer from Washington, Moscow on February 26, 1987 resumed nuclear testing; meanwhile, during Gorbachev's moratorium the U.S. had carried out 26 tests. In September 1987, however, Secretary of State George Schultz and Soviet Foreign Minister Eduard A. Shevardnadze resumed talks on strengthening the verification procedures for the TTNT and PNET that would later bear positive results (Garthoff, 1994b, pp. 214-253).

Negotiating a Comprehensive Nuclear Test Ban

Despite attempts by many officials in Washington to ignore the fact, the non-nuclear nations had made it quite clear that a comprehensive nuclear test ban had become the key to maintaining the Non-Proliferation Treaty. As spelled out below, the four previous NPT Review Conferences repeatedly, and each time more stridently, emphasized the superpower's apparent lack of

effort to achieve a total ban on testing. Since the only conclusive evidence that a country had acquired or built a nuclear weapon would be a test explosion, a state could secretly prepare a small stockpile of plutonium or of highly enriched uranium and, at a time of its choosing, embark on a testing program. A total ban on testing, coupled with inspections by the IAEA, could greatly reduce this scenario.

In part a response to this demand, Soviet President Mikhail Gorbachev declared a unilateral nuclear test moratorium, in 1991, followed by President Francois Mitterrand's surprise announcement of a French moratorium in 1992. President George W.H. Bush, however, continued to protect America's right to test. He declared in January 1990 that his administration had 'not identified any further limitations on nuclear testing ... that would be in the United States' national security interest.' Negotiations did proceed on verification protocols for the TTBT and PNET and, with the Soviets acceding to the American position, Bush and Gorbachev at their Washington summit meeting in June 1990 signed new protocols clearing the way for their ratification. Yet, Bush was reluctant to consider the CTB in spite of America's increasingly isolated position. Congress finally urged the president to end underground nuclear testing and agree to a moratorium on all U.S. underground nuclear tests. The Senate enacted legislation in 1992—known as the Hatfield-Mitchell-Exon amendment—that called for an immediate unilateral nine-month moratorium and requested the president to obtain a comprehensive test ban by September 30, 1996; if not obtained, an extended moratorium would take effect until 'another nation' tested. The legislation, meanwhile, would allow the U.S., after the expiration of the nine-month moratorium, to conduct five tests per year for three years for specified purposes—three tests were to check new safety devices for nuclear weapons, one test was to verify reliability, and one was allotted to Great Britain (which for some time had been using the Nevada Test Site). While the White House opposed the legislation, President Bush nevertheless signed it into law. With the U.S.'s joining the general unilateral moratorium, a cessation of testing has continued since 1993, more or less successfully (Goodby, 2006, p. 171).

The Hatfield-Mitchell-Exon amendment forced the Clinton administration to undertake efforts at the Conference on Disarmament, which succeeded the Eighteen-Nation Disarmament Conference, in

1968, aimed at achieving a comprehensive test ban treaty by 1996. The negotiations found only representatives from India and Pakistan opposed to a Comprehensive Test Ban Treaty (CTBT), doubtless because each was surreptitiously developing nuclear weapons. Still, the Conference drafted a proposed treaty that would prohibit any nuclear explosion that generated a fission yield or a 'zero' yield ban. The treaty prohibited any nuclear test explosions or any other nuclear explosion at any location under the treaty's jurisdiction; moreover, there was no special withdrawal clause. In addition, the treaty would create an elaborate International Monitoring System (IMS) with a worldwide network of observational technology to 'help to verify compliance with and detect and confirm violations.' A U.S. State Department Fact Sheet explained: "When complete, the IMS will consist of 337 monitoring facilities. It will be complemented by an intrusive on-site [challenge] inspection regime applicable once the Treaty has entered into force." The IMS would employ four technologies in monitoring: seismological to check on shockwaves, radionuclide to measure atmospheric radioactive particles, hydroacoustic to listen for sound waves traveling thru water, and infrasound to detect ultra-low shockwaves.

Thomas Graham, acting director of the Arms Control and Disarmament Agency (ACDA), confronted fierce bureaucratic opponents in Washington when seeking a continuation of a moratorium on testing. Since he was to lead the U.S. delegation to the crucial 1995 NPT review conference proposing to extend the treaty indefinitely, he feared that if the nuclear powers began testing, there would be little hope of gaining the needed support of the non-nuclear countries. President Bill Clinton agreed in 1993 to continue the moratorium, with annual renewals as long as long as no other nation tested, until a CTBT had been achieved. After considerable wrangling, the draft was removed from the Conference on Disarmament, and in September 1996 Australia introduced a resolution in the UN General Assembly to open the draft treaty for signature. It was approved by a vote of 158-3, with India and Iraq essentially voting, no. The United States was the first to sign. The CTB was, in President Clinton's words, 'the longest-sought, hardest-fought prize in arms control history' (Graham, 2002, pp. 237-256)..

However, for the CTB to enter into force it had first be ratified by 44 nuclear states and nuclear

threshold states, many of which were waiting for the United States to act. Unfortunately for its supporters, the U.S. Senate convincingly rejected ratification on October 13, 1999 by a vote of 48 to 51—failing to gain even a majority in support of the treaty and, of course, considerably below the two-thirds needed for approval. The CTB's defeat, according to one observer, was 'an accident of politics, an executive-legislative stalemate that resulted from clashing institutional interests, partisan struggle, intraparty factionalism, and personal vindictiveness. Certainly, it was a story of zealotry, conspiracy and incompetence in which all the key players share responsibility for an outcome that only a minority really desired.' Underlying all of the political activity was an issue of substance—'the effectiveness of the stockpile stewardship program, the capabilities of monitoring and challenge inspections' and the future of deterrence—that in some minds were uncertain factors (Dieble, 2002, p. 143).

The Clinton administration sought to ease domestic concerns with CTB "safeguards": a Science Based Stockpile Stewardship Program would ensure the reliability of America's nuclear weapons; nuclear laboratory facilities to continue progress in nuclear technology; the right to resume nuclear tests should U.S. withdraw from the CTB; and comprehensive efforts to improve monitoring systems. Despite Arizona Republican Senator Jon Kyl's insistence in 1992 that 'as long as we have a nuclear deterrent, we have got to test it in order that it is safe and it is reliable,' all U.S.'s nuclear warheads have been examined since then and found to meet these standards. Three years after the Senate's action, the National Academy of Sciences reviewed the arguments offered by critics of the treaty that questioned the adequacy of international monitoring and long-term effectiveness of the U.S. nuclear stockpile without new tests. The panel of experts concluded: 'the U.S. nuclear stockpile can be safely and reliably maintained without explosive testing. Although surveillance of weapons components and retention of high-quality scientists is imperative for the upkeep of U.S. nuclear weapons; [N]o need was ever identified for a program that would periodically subject stockpile weapons to nuclear tests.' A separate 2009 study by JASON, an independent technical review panel, reported that the 'lifetimes of today's nuclear warheads could be extended for decades, with no anticipated loss in confidence' (Kimball, 2011, p. 4).

By the end of 2010, 182 nations had signed the CTB and 153 had ratified it; however, only 35 of the required 44 had completed ratification. When Russia ratified the CTB in 2000 its action focused international attention (and blame) on the United States as the nation primarily responsible for the failure of the treaty to enter into force. Thus, the CTB has languished in the U.S. Senate, as neither President George W. Bush, an opponent of arms control measures, nor President Barak Obama who has been sympathetic to the CTB, have been able to revive it. While the Bush administration found the International Monitoring System, with its stations in Russia, China, and other sensitive regions, provided useful information, it reduced America's annual dues assessment, thus making it difficult for the CTB Preparatory Commission to collect dues from other nations. In 2011, however, more than 80 per cent of the IMS facilities had been completed. Despite the failure of the CTB to enter into force, a general moratorium on nuclear testing in effect since 1993 has been, more or less, honored. From 1945-2011, a total of 2,052 nuclear tests have taken place worldwide: the U.S. 1,030; USSR/Russia 715; U.K. 45; France 210—all prior to 1993; China 45 with 6 since 1993; India 3 with 2 since 1993; Pakistan 2 since 1993, and North Korea 2 since 1993.

The Nuclear Non-Proliferation Treaty

Although several nations early recognized the need for a formal arrangement to restrict the spread of atomic and later nuclear weapons, progress has been slow. The United Nations, despite an initial lack of success, eventually played a major role in the negotiations leading to the Non-Proliferation Treaty (NPT). Beginning with its first session in January 1946, at London, the General Assembly unanimously decided to establish the United Nations Atomic Energy Commission (UNAEC) that was charged with making specific proposals for the control of atomic energy to ensure its use for peaceful purposes, for the elimination of atomic weapons from national arsenals, and for effective safeguards against violations. There were fundamental differences in the approach of nuclear and non-nuclear states to formulas for limiting the spread nuclear weaponry; many of these differences would persist well beyond the signing of the Non-Proliferation Treaty (NPT) in 1968. Yet, as Thomas Graham indicated early in the twenty-first century: 'When the NPT was signed in 1968, it had clearly become a centerpiece of United States and world security,

and is even more so today.' President Lyndon Johnson, who deserves substantial credit for finalizing the NPT, considered the treaty to be the most important international agreement since the beginning of the nuclear age. Shortcomings aside, he was not far from correct as the nonproliferation regime grew (Graham, 2002, pp. xvii-xviii; Brands, 2006, p. 254).

After failing to gain the needed approval of the U.S.-sponsored 'Baruch Plan', in 1946, for international control of atomic energy or rallying support for a comprehensive nuclear test ban, the UNAEC gave way to the Disarmament Commission (DC) during the barren 1950s. Replacing the DC in 1962, the Eighteen Nation Disarmament Committee (ENDC) achieved greater success. Initially, the ENDC was charged with seeking agreement on a treaty for general and complete disarmament, but when that quickly proved impossible the committee turned to seeking steps to halt the spread of nuclear weapons. Earlier, in 1958, Ireland offered the initial proposal specifically aimed at preventing the spread of nuclear weapons. In 1961, the UN unanimously adopted Ireland's resolution and called on all states, particularly the nuclear weapons states, to conclude an international agreement to prevent the dissemination or acquisition of nuclear weapons. It was not until 1965, however, that the General Assembly requested the ENDC negotiate a treaty preventing the proliferation of nuclear weapons. It listed the principles on which a treaty should be based, specifying that the agreement should embody an acceptable balance of mutual responsibilities and obligations of the nuclear and non-nuclear powers and should be a step towards nuclear disarmament.

With the Soviet Union (1949), the United Kingdom (1952) and France (1960) testing of atomic devices, international fears grew, especially among non-nuclear states, about where such proliferation—the 'Nth country problem'—would lead. Gradually, the superpowers also became seriously concerned about nuclear weapons proliferation. Presidents Dwight Eisenhower and John F. Kennedy, after efforts failed to dissuade France from building a bomb, worried that an envious West Germany (and perhaps Italy) also would seek an independent nuclear deterrent. In response to NATO concerns as to whether America's nuclear umbrella covered Western Europe, Washington proposed a nuclear sharing Multilateral Nuclear Force (MLF) under NATO

command but with the U.S. maintaining an operational veto. Under this scheme, as historian Hal Brands describes it, 'mixed-nationality crews from NATO states would man nuclear-armed naval vessels, giving each participant a claim to nuclear status'. France's President de Gaulle responded contemptuously, Britain showed only lukewarm interest, and the Soviet Union—alarmed at the prospect of West Germany's participation—objected vociferously. Only West Germany retained measurable enthusiasm. Additionally, the U.S. and the Soviet Union were uneasy with Chinese nuclear weapons activities. Both President Kennedy and Lyndon Johnson's administrations, fearing the strategic balance in Asia, gave some thought to preventive strikes on Chinese nuclear facilities, preferably jointly with the Soviets; Johnson even authorized consultation with Moscow to cooperate in preventive military action. In November 1964, Secretary of State Dean Rusk suggested that the U.S. interests might be better served by encouraging Indian and Japanese efforts to develop nuclear weapons as a counterweight to Communist China. 'If you were Prime Minister of Japan [or India],' Rusk wondered, how much reliance would you put on U.S. protection if a threat from China or the Soviet Union developed?' Nikita Khrushchev, meanwhile, had earlier reneged on a Soviet promise to share nuclear weapons secrets with Communist China. On June 20, 1959, Moscow unilaterally annulled the pact that would have provided China with Soviet nuclear technology, knowing that the Chinese would eventually build its own bomb. However, in Khrushchev's words, the 'the later they master the mysteries of the atom, the better.' China tested a low yield device in October 1964 and they tested a higher yield bomb in May 1965 (Nitze, 1989, p. 210-212; Newhouse, 1989, p. 270; Khrushchev, 2000, p. 271).

China's initial nuclear test of October 15 prompted President Johnson to seek a comprehensive review of nuclear proliferation that involved a higher-level, harder look at the problem of nuclear spread. Several days later, the president created the Committee on Nuclear Proliferation—known as the Gilpatric Committee, after chairman Roswell Gilpatric—that studied possible options between November 1964 and January 1965. The state department wanted to continue pursuing the MLF to prevent European proliferation, but Gilpatric preferred the Arms Control and Disarmament Agency's effort to develop a global strategy. The United States and the Soviet Union each exchanged draft treaties on non-proliferation in 1965. By October 1966, as Anatoly Dobrynin, the

Moscow's ambassador to Washington, recalled in his memoirs, "the Soviet leadership decided to focus on the non-proliferation of nuclear weapons' because of their fears about MLF. '[I]t frightened us to think of Europeans and especially Germans anywhere near a nuclear trigger,' he continued. 'So on behalf of my government I told [Dean] Rusk this idea was the main obstacle in the way of a nonproliferation agreement: the Soviet Union was ready for negotiations to limit the spread of nuclear weapons, but the U.S. government must make its choice between a nonproliferation agreement or a NATO nuclear force.' By 1967, the two powers had resolved their differences; the U.S. agreed to abandon the multilateral nuclear force in 1965, and the USSR withdrew its opposition to setting up a nuclear planning committee in NATO. This enabled the two powers to submit separate but identical drafts of a treaty to the ENDC (Dobrynin, 1995, pp. 147-148).

With respect to negotiations, the Eighteen Nation Disarmament Committee's nonaligned members argued that a non-proliferation treaty must not simply divide the world into nuclear 'haves' and 'have nots,' but must balance mutual obligations. They argued that in exchange for the non-nuclear states ending the 'horizontal' proliferation of nuclear weapons, the nuclear powers should end their 'vertical' proliferation. They listed the specific steps in the following order: (a) a comprehensive nuclear test ban; (b) a complete cessation of the production of fissionable material for weapons purposes; (c) a freeze on, and gradual reduction of, nuclear weapons stocks and their means of delivery; (d) a ban on the declared use of nuclear weapons; and (e) security assurances to the non-nuclear states by the nuclear powers. These non-aligned states' demands garnered the endorsement of some non-nuclear American and Soviet allies. The two nuclear superpowers would not agree to listing these specific measures in the operative part of the treaty, but eventually accepted a compromise formula. After much prodding and pressure, the U.S. and USSR agreed to a provision relating to halting and reversing the nuclear arms race—Article VI. The agreed text of Article VI, read: 'Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.' The superpowers also agreed to clarify this article by stating their ultimate intention to end the nuclear arms race.

Although several individuals and states still considered the draft NPT to be inherently discriminatory, they also believed that it was significant as a first step that could lead to the elimination of all nuclear weapons. The Non-Proliferation Treaty was signed on July 1, 1968, but the arguments over Article VI were far from over.

NPT Review Conferences

The NPT provided for conferences to be held every five years to review the operation of the Treaty, with a view to assuring that the purposes of the Preamble and the provisions of the Treaty were being realized. The first four review conferences were held—in 1975, 1980, 1985 and 1990. In accordance with Article X, a conference had to be held in 1995, to determine whether the Treaty shall continue in force indefinitely, or shall be extended for an additional fixed period or periods. Since the non-nuclear states with nuclear facilities dedicated to peaceful uses had agreed in Article III to accept full-scope IAEA safeguards to ensure their compliance with the NPT, the review procedure was provided to assure the compliance of the nuclear parties. In practice, the review conferences have served merely to assess, but not to assure, the compliance of the nuclear parties.

At all four early review conferences most of the non-nuclear parties expressed dissatisfaction with the failure of the three nuclear parties to live up to the obligations regarding the implementation of the nuclear disarmament pledges contained in Article VI and the Preamble. Differences also emerged regarding the provisions for promoting the peaceful uses of nuclear energy and the question of safeguards, which were the main interest to the nuclear powers concerned in reducing the risks of horizontal proliferation. On the whole, however, these two issues were secondary ones. The non-nuclear states did not constitute a solid bloc at any of the review conferences. Those allied to either the Eastern or Western nuclear states tended to side with the Soviet Union or the United States. On the primary disarmament issue, the non-nuclear parties most critical of the nuclear powers were the neutral and non-aligned (NNA) states. Unlike most conferences dealing with arms control issues, the three nuclear powers and their allies together resisted the demands of the NNA countries for full

compliance of their commitments to nuclear disarmament. Their overriding desire to prevent the horizontal proliferation of nuclear weapons, which they feared would undermine their nuclear monopoly and dominance, prevailed during even the darkest days of the Cold War, with some lessening at the 1985 and 1990 reviews.

At the First Review Conference in 1975, attended by 57 of the then 96 parties to the Treaty, all non-nuclear parties claimed that they had lived up fully to their commitments under the NPT, but the NNA states insisted that the nuclear parties had not done so. Their principal complaints were sustained underground nuclear testing, lack of a substantial reduction in nuclear arsenals, and a failure to provide increased aid to the developing countries in the peaceful uses of nuclear energy. The nuclear powers reluctantly promised to try harder to meet the demands of the non-nuclear states. The Second Review Conference in 1980, attended by 75 of the 115 parties to the NPT, found the nuclear parties had made precious little progress toward meeting the complaints of the non-nuclear parties. The SALT II Treaty remained unratified, little progress had been made toward ending the nuclear arms race, and the comprehensive nuclear test ban remained in limbo. Sigvard Eklund, then Director-General of the IAEA, opened the conference complaining: 'The non-proliferation regime can only survive on the tripod of the Non-Proliferation Treaty, effective international safeguards and a comprehensive nuclear test ban treaty. The vital third leg is still missing as it was five years ago.' The nuclear powers refused to offer concessions on nuclear arms control measures, failing even in the Geneva Conference on Disarmament—which succeeded the Conference of the Committee on Disarmament (1969-1978)—to begin negotiating a CTB. Since no consensus was achieved on ending and reversing the nuclear arms race, the conference ended without even any formal re-affirmation of support for the NPT.

When the Third Review Conference met in 1985, attended by 86 of the 130 parties to the NPT, the outlook looked gloomier than before as the nuclear arms race was proceeding at an even faster pace. Far from the nuclear powers living up to their obligations under Article VI, negotiations for several measures of nuclear arms control had either been suspended or stalemated. Addressing the 1985 conference, Javier Perez de Cuellar noted of the escalating nuclear arms race: 'Unless

the nuclear arms race between the major powers is halted and the further spread of military capability deterred, the terrible possibility of wholesale destruction will increase yet further.' Referring to the commitments in Article VI he said, 'In this respect, the implementation of the treaty has been largely one-sided, to the understandable concern and profound dissatisfaction of its non-nuclear weapon parties. There must be recognition of the fact that restraint on one side cannot reasonably be demanded in the face of unlimited expansion on the other.' As no consensus appeared likely concerning compliance with Article VI, the NNA members announced they would press for a vote on three resolutions proposed by Nobel Peace Laureate Ambassador Alfonso Garcia Robles of Mexico. The resolutions called for: (1) the resumption in 1985 of negotiations by the three nuclear powers for a comprehensive test ban treaty; (2) a moratorium on testing pending the conclusion of a CTB treaty; and (3) a freeze on the testing, production, and deployment of nuclear weapons.

The Soviet Union, like the United States, wanted to avoid a vote and reach a consensus final declaration, but it stated that if the conference proceeded it too would vote for all three resolutions since they reflected basic Soviet policies. Of the 86 states participating in the conference, some 50 were NNA—about 20 were Western states and 10 Socialist states. If the Socialist states voted for the resolutions, as well as some likely Western states, they probably would have been adopted. To avoid an adverse vote, U.S. Ambassador Lewis Dunn and Ambassador Garcia Robles, together with other delegates, worked out a compromise for a Final Declaration:

'The conference, except for certain states, deeply regretted that a comprehensive multilateral Nuclear Test Ban Treaty banning all nuclear tests by all states in all environments for all time had not been concluded so far and, therefore, called on the nuclear weapons states party to the treaty to resume trilateral negotiations in 1985, and called on all the nuclear weapons states to participate in the urgent negotiation and conclusion of such a treaty as a matter of highest priority in the Conference on Disarmament.'

The Declaration also noted that certain

states (the U.S. and U.K.) extended the highest priority to deep and verifiable reductions in existing arsenals of nuclear weapons. It also noted the USSR's readiness to proceed with negotiations to conclude a Comprehensive Ban Treaty. For the first time, a Final Declaration focused primary attention on the disarmament aspects of the NPT and stressed the overriding importance of CTB as having highest priority in the 'cessation of the nuclear arms race at an early date.'

The non-nuclear states had sent a message to the nuclear parties that they too must abide by their treaty obligations to halt and reverse the nuclear arms race if the NPT were to endure. Thus, while the Third Review Conference was considered to be a success, the NPT was given only a reprieve, and not a clean bill of health.

When the Fourth Review Conference opened in 1990, with only 84 out of 141 parties in attendance, the delegates understood this would be the last review before the 1995 extension conference that would decide the NPT's future. Moreover, the Cold War had ended, East and West Germany were united, the Warsaw Pact was dissolving, and NATO's future was uncertain. The Non-Aligned Movement had lost much of its *raison d'être* and the Gulf Crisis threatened to split the Arab world. Even though the five nuclear powers appeared to be cooperating, the prospects for arms control and disarmament seemed sanguine. The NNA states, disappointed that no negotiations for a CTB had even begun, arrived determined to press the nuclear parties for substantial measures of nuclear disarmament. Their confidence was eroding, not only in the perceived sincerity of the nuclear powers, but also in the non-proliferation process. Some NNA critics noted that the NPT had successfully prevented the proliferation of nuclear weapon states but had totally failed in preventing the proliferation of nuclear weapons. The number of nuclear powers had remained at five, while the number of strategic nuclear weapons possessed by the U.S. and USSR had increased more than six fold since the NPT was signed. The NNA states presented their demands in four resolutions: focusing on measures to halt, freeze and reverse the nuclear arms race, especially a CTB and a moratorium on testing; strengthening IAEA safeguards on exports of nuclear material, equipment and technology; implementing provisions of Article VI to make possible 'a significant extension of the Treaty beyond 1995'; and negotiating in good faith at the new test ban

amendment conference in January 1991. Nigeria and Egypt also offered separate proposals related to security assurances for non-nuclear states against nuclear threats or attack.

The U.S. and U.K. put forward no new ideas or incentives, instead stressing recent arms control progress—the 1987 INF Treaty, progress in the START I talks, a convention to eliminate chemical weapons, and confidence building measures. The NNA acknowledged the progress, but found it grossly inadequate. The Soviet Union supported most of the NNA's measures, but maintained its traditional solidarity with the United States as a confrontation loomed over the CTB. On the last day of the conference, Swedish Ambassador Carl-Magnus Hyltenius proposed a final compromise on a CTB that he urged the delegates to accept without amendment: 'The Conference further recognized that the discontinuance of nuclear testing would play a central role in the future of the NPT. The conference also stressed the significant importance placed upon negotiations, multilateral and bilateral, during the next five years, to conclude a CTB.' The NNA states accepted the compromise text without change, but the United States insisted on reference to the American-Soviet step-by-step negotiations. Thus, the conference ended without a substantive final declaration or any reaffirmation of support for the NPT, and without any request for a review conference in 1995. The discussions at the 1990 review were on the whole more thorough and franker than in the past and the real differences among the nuclear and non-nuclear parties were clarified. UN Secretary-General Javier Perez de Cuellar added emphasis to the issue on 25 October 1990: 'The issue of nuclear weapons—and their continued testing—remains a divisive one, as the recent Fourth Review Conference on the Nuclear Non-Proliferation Treaty has shown.... It is of paramount importance that a viable regime for the nonproliferation of nuclear weapons beyond 1995 is agreed upon by the international community.... I have repeatedly underlined the desirability of a comprehensive test ban treaty and I would urge that all sides seek to make progress on this sensitive and intractable question' (Epstein, 1993, II, pp. 864-868).

Indefinite NPT Extension, 1995

The 1995 conference was most likely to be the only opportunity to create a permanent NPT regime that had become the focal point of the global search to halt the spread of nuclear weapons and for efforts aimed at peaceful nuclear cooperation. Surely, it was necessary to make certain that the IAEA safeguards that radiated from the NPT not be terminated. These points were not always easy to make to nations with divergent interests. More specifically, the message from previous review conferences was that the negotiation of a comprehensive test ban was vital, but other issues were also raised. Some states, as Thomas Graham, the U.S. chief official charged with preparing for the conference, has written, wanted an 'updated and legally binding negative security assurances—pledges by the nuclear weapons states not to attack non-nuclear states with nuclear weapons—and positive security assurances—pledges by the nuclear states to come to the aid of non-nuclear weapon states threatened or attacked with nuclear weapons. Some countries, primarily in the Middle East, underscored the problem of Israel not being an NPT party.' Many states also desired more technical assistance for developing peaceful nuclear facilities Graham, 2002, p. 292; Scheinman, 2005, pp. 6-8).25

As Washington reviewed its position on the CTB, some individuals were prepared—if a comprehensive test ban was the price—to have the United States abandon the NPT in 1991. Disarmament Times, a U.N.-related publication quoted Kathleen Bailey of President Reagan's U.S. Arms Control and Disarmament Agency in December 1989 as saying: "If the U.S. is forced to choose between its own national security and its nuclear testing program versus the survival of the NPT—which we would dearly like to see—the U.S. would choose maintenance of its own national security and therefore its own nuclear testing program." The New York Times which had for years opposed a comprehensive test ban, scolded the administration in a 27 January 1991 editorial for its intransigence. It charged U.S. delegate Mary Elizabeth Hoinkes with 'gratuitously offending states that want a total test ban' when she told the conference that 'consideration of testing limitations is a serious undertaking that should be conducted in a serious manner.' The editorial concluded: 'For the U.S. to insist on testing undermines nuclear arms control and sends the wrong message to potential nuclear powers: "Do as I say and not as I do".' It was left for Soviet Foreign Minister Edvard Shevardnadze to support the CTB before the U.N. General Assembly on September 25, 1990, in a most direct, unvarnished manner: 'As a matter of

the utmost urgency, nuclear tests must be stopped. If testing is stopped, we have a chance to survive; otherwise the world will perish. I have no doubt whatever about this. We need to tell people about this frankly without taking refuge in all sorts of specious arguments' (Epstein, 1993, II, pp. 869-871).

President Clinton's decision in 1993 to join negotiations on a CTB eased the pressure on the U.S. delegation and allowed the Americans to take a leading role in preparing for the NPT's indefinite extension. In December, Graham became a leading figure in developing and pursuing America's strategy for ensuring the treaty's permanence by eventually visiting forty individual governments in North and South America, Europe, Africa, Asia and the Pacific. He sought to take the basic issues concerning security and peaceful use related to nuclear energy directly to government officials rather than just their permanent representative in New York. Another undertaking aimed at providing momentum for the conference took place on 11 April 1995, when the UN Security Council adopted Resolution 984 that acknowledged the unilateral pledges by the five nuclear-weapon states not to use or threaten to use nuclear weapons against non-nuclear members of the NPT.

Egypt was vitally and vocally concerned that its neighbor Israel, possessed a nuclear arsenal but was not a member of the NPT. Cairo would not give its support unless it received formal assurances from Tel Aviv, which were not forthcoming since Israel worried about Iran and Iraq. At the conference, President Clinton and Vice President Albert Gore urged delegates to extend the treaty indefinitely and permanently. The non-aligned states meeting during the second week of the conference at Bandung, Indonesia, were asked to provide consensus support for a limited NPT extension that would allow each country to engage in bilateral consultations with Washington. Ambassador Mongbe, the permanent New York representative of the African nation of Benin, became the 'hero of Bandung' when he objected, declaring Benin desired an indefinite extension, and thus nullifying the non-aligned attempt for a limited extension. Graham found his most consistent international supporters to be France and Australia; however, other nations played major roles in final decision. South Africa, for example, was a key broker. The tipping point, however, came during the third week of the conference when

Canadian ambassador Chris Weddahl introduced a resolution on the floor of the General Assembly, backed by 105 co-sponsors (a number that quickly grew to 115), requesting an indefinite extension of the NPT. When the states aligned with South Africa were included, the number of supporters of the Canadian resolution exceeded 150.

The final agreement, adopted by consensus on May 11, 1995, consisted of three elements: the permanent extension of the NPT; the Statement of Principles and Objectives on Nuclear Non-Proliferation and Disarmament; and a strengthened review process. The agreed Statement of Principles and Objectives committed all NPT members, generally, to negotiated reductions in nuclear weapons in support of the treaty and, specifically, to a comprehensive test ban in 1996. It also called for universal treaty membership—by 1998, only India, Pakistan, Israel and Cuba remained outside the NPT—and support of existing and future nuclear weapon-free zones (particularly ones for the Middle East and Africa). Finally, the Statement urged approval of improved NPT verification, especially ratification of the 93+2 Protocol that enhanced safeguard standards (adopted by the IAEA in June 1997). The non-aligned states, led by Indonesia and South Africa, linked the Statement of Principles and Objectives to an enhanced review process. 'All of this is part of the indefinite extension package,' Graham noted, 'and it is important to understand that a failure to meet the obligations of the Statement of Principles and Objectives—especially reductions of nuclear weapons—[would] endanger the permanent status of the NPT or even the NPT regime itself.' Non-nuclear states were willing to remain second-class states under the treaty for so long (Graham, 2002, pp. 263-291).

The Bad, the Ugly & the Optimistic

The results of three subsequent NPT review conferences, in 2000, 2005, and 2010, varied greatly. The 2000 Review Conference occurred following a grim period for the nonproliferation movement. The Comprehensive Test Ban Treaty, signed in 1996, was rejected by the U.S. Senate three years later, nuclear tests were held by India and Pakistan in 1998, the incoming George W. Bush administration threatened cancellation of the Anti-Ballistic Missile (ABM) Treaty, the U.S., U.K., France and Russia still adhered to declared first-

use nuclear options, and no progress on negotiated nuclear reductions had taken place. Despite this disheartening state of affairs, surprisingly the conference was one of the most successful in arriving at a positive consensus on issues indicating a continued worldwide commitment to the basic principles of the NPT. This respite was in large measure managed by the New Agenda Coalition—made up of Mexico, South Africa, Brazil, Ireland, Sweden, New Zealand, and Egypt—that pressed nuclear weapons states for progress on disarmament before the enthusiasm for nonproliferation dissipated.

Discussion of Article VI of the NPT raised once again the basic question: Had the nuclear weapons states done enough to meet their commitment to nuclear disarmament? Although Article VI did not establish a timetable for measuring results, the issue has been a major point of debate (and contention) since the treaty entered into force in 1970. To gain a consensus in 2000, as Lawrence Scheinman pointed out, the delegates 'translated the 1995 principles and objectives on disarmament into an action agenda of 13 steps for systematic and progressive efforts to implement NPT Article VI.' Among these 'practical steps' was preserving and strengthening of the ABM Treaty, continuing the test moratorium until the CTB entered into force, an 'unequivocal undertaking' by the nuclear weapons nations to proceed with eliminating their weaponry, ratifying START II and concluding START III, applying the 'principle of irreversibility' to all nuclear reduction pacts, and negotiating a verifiable fissile material cutoff treaty by 2005. Additionally, the delegates called for each state to regularly report on their implementation of Article VI obligations and for a general reaffirmation of the goals of general and complete disarmament under an effective system of international controls (Graham, 2002, p. 292; Scheinman, 2005, pp. 6-8).

As the 2005 Review Conference loomed on the horizon, the 2000 conference's 13 steps loomed as the triumph of optimism over reality. There had been a few successes during the previous five years. Washington listed the U.S.-Russia Strategic Offensive Reductions Treaty (2002), the U.S.'s elimination of a number of missile submarines, heavy bombers and deactivation of the 'Peacekeeper' ICBMs, removing its nuclear triad from alert status, and a moratorium on the production of fissile material for nuclear weapons (1992) as positive steps. Other nuclear weapons states pointed to their accomplishments.

These, were: Russia, the United Kingdom, and France have ratified the CTBT; France and the United Kingdom have taken steps making elements of their nuclear weapons consistent with the principle of irreversibility; and the United Kingdom and France have taken some steps toward reducing the operational status of their weapons systems. China had committed to a policy of no-first-use of nuclear weapons and, along with France and the United Kingdom, Beijing has ratified an Additional Protocol to its safeguards agreement with the International Atomic Energy Agency (IAEA). Then, unexpectedly, Libya was persuaded in 2003 to dismantle its secret, yet nascent, nuclear weapons program and agree to IAEA inspections and to its Additional Protocol. There remained, nevertheless, several of the 13 steps yet to be undertaken and, in some instances, a regression.

Disappointments outdistanced achievements. North Korea in January 2003 announced its intent to withdraw from the NPT, and, in December, Iran was initially charged by the IAEA with clandestine nuclear activities. China and Russia's unsuccessful attempt during the past five years to tie negotiations for the prevention of an arms race in space with a fissile material cutoff treaty (FMCT) blocked progress on the latter. Then, too, China's modernization of its nuclear weapons and Russia's withdrawal of its pledge of no-first-use, along with its insistence on the right to use nuclear weapons in response to attack by any weapon of mass destruction (WMD), raised doubts about these nuclear weapons states' commitment to disarmament. Great Britain's 2000 pledge not to use nuclear weapons against non-nuclear member of the NPT has been complicated by its membership in NATO which reserves the right to use nuclear weapons first in a conflict. Although NATO believes such use was 'extremely remote,' British officials declared that nuclear weapons would be employed only in 'extreme circumstances of self-defence' (Scheinman, 2005, pp. 10-11, 17.

Washington's actions, however, drew the most attention and frequently generated hostility. To pursue its missile defense program, President George W. Bush withdrew from the ABM Treaty (2002), which prompted Russia to prevent START II from entering into force. The Bush administration further chose to ignore the 13 steps when it announced it had no plans to reconsider ratification of the CTB Treaty, when it stated in 2004 that a final agreement on fissile material was not possible

because it could not be 'effectively verifiable,' when it did not reconsider its 'first-use' doctrine and stated explicitly in its secret 2002 National Security Presidential Directive-17 that the U.S. would consider nuclear weapons among retaliation options should it be attacked by any weapons of mass destruction, and when it rejected an irreversibility pledge in the Strategic Offensive Reductions Treaty. 'Disinclined to rely on multinational regimes and institutions that were seen as cumbersome and lacking decisiveness,' as the distinguished academic commentator Lawrence Scheinman delicately phrased it, the Bush administration chose to counter the perceived threats of rogue states and terrorists 'by unilateral means or, where necessary or appropriate, non-institutionalized multilateral arrangements' (Scheinman, 2005, pp. 8-11). Buried deep in the history of American relations with foreign states there has always lingered an urge for unilateral action when tangled affairs challenged domestic desires. The same may be said of Washington's enthusiasm for international law—it was often applied when politically useful, ignored when it was not. The Bush administration's war to prevent Iraq from developing non-existent nuclear weapons and subsequently its deliberate evasion of the Geneva Conventions of 1949 brought to the surface both urges.

The 2005 Review Conference provided an ugly diplomatic spectacle. 'After four weeks, the Nuclear Nonproliferation Treaty review conferences ended May 27 as it began,' summarized a close observer, 'with competing agendas, widespread distrust, and no consensus on next steps for stopping the spread of or eliminating nuclear weapons.' Egypt and the United States were the major protagonists. The U.S.'s Assistant Secretary of State for Arms Control Stephen Rademaker claimed 'Egypt was second to none in creating obstacles,' while other delegates confided that the conference's failure was preordained by the Bush administration's earlier ignoring of the 13 disarmament step. Egypt defended its actions, claiming it desired to preserve the 'balance of commitments' between the nuclear haves and have-nots. The U.S. complained that the other states refused to bring current violators of the NPT—North Korea and Iran—to heel. Having virtually the final say, Canadian Ambassador Paul Meyer blasted certain unnamed nations: 'We have witnessed intransigence from more than one state on pressing issues of the day, coupled with the hubris that demands the priorities of the many be subordinated to the preferences of the few' (Boese, 2005, pp. 22-23..32

The 2010 Review Conference began on a positive note and ended in an optimistic political atmosphere. President Barack Obama's Prague speech a year earlier committing the U.S. to seek a peaceful world without nuclear weapons and his administration's support of the NPT were hopeful signs amidst the uncertainty regarding Iran's nuclear plans, the conference's inability to find a formula to deal with nuclear weapons in the Middle East, North Korea's nuclear tests, and a decade that had achieved little nuclear disarmament. 'With fears that it was no longer fit for purpose,' chief Irish delegate Alison Kelly wrote, '2010 was widely seen as a make-or-break year for the future relevance and sustainability of the NPT.' These concerns were promptly laid to rest. 'For the first time in the history of the NPT,' she continued, 'forward-looking action plans have been agreed across all three pillars—disarmament, nonproliferation and peaceful uses of nuclear energy—and on implementation of the 1995 Middle East resolution and the establishment of a Middle East zone free of nuclear weapons and other weapons of mass destruction.' Perhaps a fourth pillar should be added—that of nuclear security. 'For the first time in the treaty's 40-year history,' Deepti Choubey of the Carnegie Endowment for International Peace observed, 'parties recognized nuclear security as an important aspect of the non-proliferation regime and agreed on steps to prevent the theft of nuclear material and to address the threat of nuclear terrorism' (Kelly, 2010, p. 21).

In general, the NPT received a temporary reprieve at the 2010 conference. But no single review conference can repair all the deficiencies that plagued the nonproliferation regime. The NPT can only provide the international legal framework within which the basic work can be accomplished by the IAEA, the Nuclear Suppliers Group, the UN Security Council, and other bilateral and multilateral arrangements that focus on such activities as establishing nuclear weapons-free zones, securing nuclear facilities and material, and developing enhanced verification systems. Often overlooked is that the initial charge of the NPT was not to prevent or prohibit non-nuclear parties from developing a nuclear weapons capability or option; it was to prohibit them from acquiring or manufacturing actual nuclear weapons or explosive weapons. The evolution of the various components of nonproliferation regime certainly has expanded its reach. It will require all the powers of diplomacy to reach the next level (Siracusa, 2010b).

*Professor Joseph M. Siracusa, Royal Melbourne
Institute of Technology University, Melbourne,
Australia.*

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